

VAYNBERG, G.D., inzh.; KRICHESKAYA, Ye.I., kand. tekhn. nauk;
MAZALOV, A.N., inzh.; ROZENFEL'D, A.G., inzh.; FOLOMIN,
A.I., doktor tekhn. nauk; TESLER, P.A., kand. tekhn. nauk;
SHOLOKHOV, V.G., arkhit.; RUBANENKO, B.K., glav. red.;
ROZANOV, N.P., zam. glav. red.; ONUFRIYEV, I.A., red.;
YUDIN, Ye.Ya., red.; NASONOV, V.N., red.; ISIDOROV, V.V.,
red.; MAKARICHEV, V.V., red.; POLUBNEVA, V.I., inzh., red.

[Improving the durability of industrial built-up roofs]
Voprosy povysheniia dolgovechnosti industrial'nykh sorme-
shchennykh krysh. Moskva, Gosstroizdat, 1962. 43 p.
(MIRA 17:4)

1. Akademiya stroitel'stva i arkhitektury SSSR. Nauchno-
issledovatel'skiy institut organizatsii, mekhanizatsii i
tekhnicheskoy pomoshchi stroitel'stva. 2. TSentral'nyy
nauchno-issledovatel'skiy i proyektno-eksperimental'nyy
institut industrial'nykh, zhilykh i massovykh kul'turno-
bytovykh zdaniy Akademii stroitel'stva i arkhitektury SSSR
(for Vaynberg, Krichevskaya, Mazalov, Rozenfel'd, Folomin).
3. Nauchno-issledovatel'skiy institut stroitel'noy fiziki
Akademii stroitel'stva i arkhitektury SSSR (for Sholokhov).
4. Nauchno-issledovatel'skiy institut betona i zhelezobe-
tona Akademii stroitel'stva i arkhitektury SSSR, Perovo
(for Tesler).

MAZALOV, A.N., inzh.; MINTSILS, M.Ya., inzh.

Automotive dust-collector. Mekh.i avtom. proizv. 17 no.2:35 P '63.
(MIRA 16:2)
(Dust collectors)

MAZALOV, A.N., tekhnik

Mechanized cleaning of machine shops. Mashinostroenie
no.6:21-22 N-D '65. (MIPA 18:12)

~~MAZALOV, Andrey Trifonovich; GOLOVAN', Pavel Fedotovich; GONCHAROV, Pavel Nikolayevich; MAZLOV, Aleksey Trofimovich; RAKITO, Eduard Iosifovich; CHMOMEEV, N.M., inzhener, redaktor; VERNINA, G.P., tekhnicheskii redaktor~~

[Installation of automatic blocking apparatus and electric centralization] Montazh ustroistv avtoblokirovki i elektricheskoi tsentralizatsii. Moskva, Gos.transp.shel-dor, izd-vo, 1957. 399 p. (MLRA 10:9)
(Railroads--Signaling--Block system)

MAZALOV, A.T.; MUCHKIN, N.F.

New reinforced concrete elements in building the signal system. Transp. stroi. 11 no.5:10-12 My '61. (MIRA 14:6)

1. Glavnnyy inzhener tresta Transsignalstroy (for Mazalov).
2. Glavnnyy tekhnolog tresta Transsignalstroy (for Muchkin).
(Railroads—Signaling) (Reinforced concrete)

MAZALOV, L.; YAVORSKIY, I., doktor tekhn.nauk

In favor of the application of the communist labor movement
in science. Tekh.mol. 30 no.9:8 '62. (MIRA 15:9)

1. Sekretar' komiteta Vsesoyuznogo Leninskogo kommunisticheskogo
soyuza molodezhi (for Mazalov). 2. Predsedatel' nauchno-
proizvodstvennoy komissii Ob'yedinenennogo komiteta
professional'nogo soyuza Sibirsksogo otdeleniya AN SSSR
(for Yavorskiy).

(Research)
(Socialist competition)

L 3403-66 EWT(1)/EWT(m)/EPF(c)/EPF(n)-2/T/EWP(t),EWP(b) IJP(c)
JD/JG/GG

ACCESSION NR: AP5024210

UR/0020/65/164/003/0545/0548

63

AUTHORS: Mazalov, L. N.; Vaynshteyn, E. Ye.; Zyryanov, V. G.

57

8

TITLE: On the relation of zone and discrete absorption in x ray spectra of atoms
in polar crystals 44,55,21

SOURCE: AN SSSR. Doklady, v. 164, no. 3, 1965, 545-548

TOPIC TAGS: x ray spectroscopy, polar crystal, alkali halide, conduction band
electron, lithium compound, silver compound, sodium compound, potassium compound,
rubidium compound

ABSTRACT: X-ray spectra for LiCl, AgCl, NaCl, KCl, and RbCl were determined. The investigation was initiated to clarify the relation between the zone and exciton absorption spectra of atoms in polar crystals. The experimental conditions were identical to those described by E. Ye. Vaynshteyn, L. N. Mazalov, and V. G. Zyryanov (Fiz. tverd. tela, 7, v. 5, 1965). The experimental results are presented graphically (see Fig. 1 on the Enclosure). By combining their experimental results with literature data on the photoelectric effect, ultraviolet spectra, F centers, x-ray, K and L spectra, the authors come to the conclusion that in all x-ray component spectra of the polar crystals investigated there exists a relatively wide region (of the order of several electron volts) situated below the

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L 3403-66

ACCESSION NR: AP5024210

conduction band which originates from the transition of photoelectrons to exciton levels. The comparisons are presented graphically. The authors further suggest that the two sharp maxima in the L_{II}, III chlorine absorption spectra in KCl and

NaCl crystals reported by A. P. Lukirskiy and T. I. Zimkina (Izv. AN SSSR, ser. fiz., 28, 763, 1964) are also of exciton origin. Orig. art. has: 4 graphs.

ASSOCIATION: *Institut neorganicheskoy khimii, Sibirskogo otdeleniya Akademii nauk SSSR (Institute for Inorganic Chemistry, Siberian Section of the Academy of Sciences, SSSR); Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo (Institute for Geochemistry and Analytical Chemistry)*

SUBMITTED: 25Jan65

ENCL: Cl

SUB CODE:

NO REF SOV: 006

OTHER: Oll

Card 2/3

L 3403-66
ACCESSION NR: AF5024210

ENCLOSURE: 01

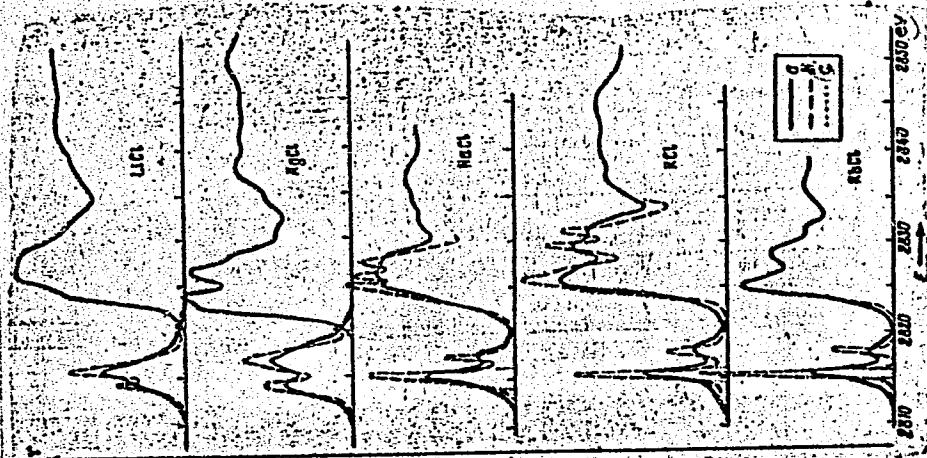


Fig. 1. $K_{\beta_{1x}}$ emission band and K chlorine absorption edge in LiCl, AgCl, NaCl, KCl, and RbCl. a - experimental curves; b - spectra corrected for experimental distortion and inner level width; c - extrapolation of corrected contour to zero intensity.

Card 3/3 Rev

S/051/60/009/002/013/013/XX
E201/E491

AUTHORS: Mazalov, L.N. and Batsanov, S.S.

TITLE: Use of the Perturbation Theory in Calculation of Ionic Refractivities of Lanthanides and Actinides

PERIODICAL: Optika i spektroskopiya, 1960, Vol. 9, No. 2, pp. 264-266

TEXT: Ionic refractivities R were deduced from $R = 2.522\alpha$ where α is the electronic polarizability calculated using the perturbation theory. A formula for α was first tested on the following alkali and alkaline-earth ions: Li^+ , Na^+ , K^+ , Rb^+ , Cs^+ , Be^{2+} , Mg^{2+} , Ca^{2+} , Sr^{2+} and Ba^{2+} (Table 1). The formula gave good agreement (to within 10%) with experiment. The same formula was then used to calculate α , and hence R of the following lanthanides and actinides: Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Mv (Tables 2 and 3). Good agreement (to within 2%) was obtained with the only available experimental values of R for La^{3+} , Ce^{3+} and Nd^{3+} . There are 3 tables and 10 references: 3 Soviet, 4 English, 1 German, 1 Swedish and 1 translation.

SUBMITTED: March 3, 1960

Card 1/1

BATSANOV, S.S.; MAZALOV, L.N.; CHIRKOV, V.I.

Computing refractions of ions of the "non-noble" gases. Izv.Sib.
otd. AN SSSR no.2:121-125 '61. (MIRA 14:3)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

(Ions)

BATSANOV, S.S.; MAZALOV, L.N.

Effect of the crystal field on the size of ion refractions.
Izv.Sib.odt.AN SSSR no.5:46-50 '61. (MIRA 14:6)
(Crystals) (Ions) (Refraction)

L 11993-65 EMA(k)/EMT(l)/EEC(t) APGC(b)/AFWL/SSD/ASD(a)-5/AS(mp)-2/BSB/
ESD(c)/ESD(gs)/ESD(t) S/0181/64/006/011/3465/3467
ACCESSION NR: AP4048430

AUTHORS: Mazalov, L. N.; Vaynshteyn, E. Ye.; Trushnikova, L. N.

TITLE: X-ray K-absorption spectra of potassium in mixed KCl-KBr crystals

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3465-3467

TOPIC TAGS: x ray spectrum, K band, absorption spectrum, mixed crystal, potassium compound, fluorescence spectrum, spectrum shift

ABSTRACT: Mixed KCl-KBr crystals were prepared in accordance with the recommendations given by W. H. McCoy and W. E. Wallace (J. Am. Chem. Soc., v. 78, 5995, 1956). X-ray analysis confirmed the homogeneity of the samples and showed that the lattice parameter obeyed Vegard's law. The fine structure of the K-absorption spectra of potassium was investigated between 1 and 25 eV using a vacuum fluorescence spectrograph working under "reflection" conditions. Quartz

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L 11993-65

ACCESSION NR: AP4048430

3

was used as the reflecting crystal. The fine structure of all compositions exhibited five maxima: A, B, C, D, and E. The first maximum (A) shifted from 3610 eV for KCl to 3611 eV for KBr and the second (B) -- from 3614 eV for KCl to 3613 eV for KBr. The dependence of this shift on KBr content (in mol. %) was linear, both for A and B. These results were analogous to the published data on a similar shift in the ultraviolet region of the spectrum." "The authors thank L. I. Doroshenko and L. I. Perevalova for help in the measurements." Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Institut neorganicheskoy khimii SO AN SSSR (Institute of Inorganic Chemistry, Siberian Department, AN SSSR)

SUBMITTED: 17Feb64

ENCL: 00

SUB CODE: SS, OP

NR REF SQN: 1003

OTHER: 003

Card 2/2

L 52523-65 EWT(1)/EWT(m)/EWP(t)/EWP(b) LJP(c) JD/JG
ACCESSION NR: AP5010718 UR/0181/65/007/004/1099/1104

AUTHOR: Vaynshteyn, Z. Ye.; Mazalov, L. N.; Zyryanov, V. G.

TITLE: Investigation of the valence band in crystals of chlorides of alkali elements by means of their x-ray emission spectra

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1099-1104

TOPIC TAGS: valence band, hole band, alkali halide crystal, x ray spectrum, emission spectrum, band width

ABSTRACT: The purpose of the investigation was to compare the results of theoretical calculations, on which various physical approximations are based, with experiment. This was done by determining the fine structure of the fluorescent x-ray emission band of chlorine in the crystals LiCl, NaCl, KCl, RbCl, and AgCl, and also in mixed crystals of the KCl-KBr system. In addition, the K_B^1 and K_B^5 potassium ions were investigated in KCl. The fluorescence spectra were obtained on a spectrometer (DRS-2); the spectra were photographed.

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001033120008-3

potassium ions were investigated in KCl. The fluorescence spectra were obtained with a long-wave focusing x-ray spectrograph (DRS-2); the spectra were photographed. A quartz crystal operating in the reflection mode was used as an analyzer. The $K\beta_{1,x}$ emission bands of chlorine were found to have an analogous structure in all

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APPROVED FOR RELEASE: 06/14/2000

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52523-65

ACCESSION NR: AP5010718

the alkali-halide crystals. The experimentally observed width of the chlorine emission band in NaCl, KCl, and RbCl is in good agreement with the theoretical width of the actual hole band in these crystals. The experiments confirm also the theoretical dependence of the width of the actual band on the lattice constant of the alkali-halide crystals. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut neorganicheskoy khimii CO AN SSSR, Novosibirsk (Institute of Inorganic Chemistry SO AN SSSR)

SUBMITTED: 04Jul64

ENCL: 00

SUB CODE: 88, OP

MR REF SOC 010

OTHER: 013

CCR
Card 2/2

L 21497-66 EWT(m)/EWP(j) NM/RM
 ACC NR: AP6009158

SOURCE CODE: UR/0079/66/036/003/0532/0537

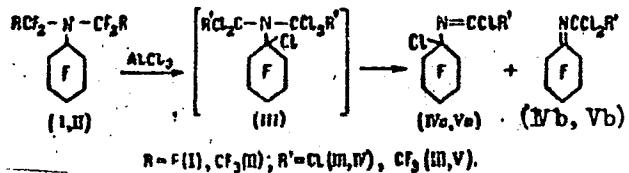
AUTHOR: Gerasimov, S. I.; Mazalov, S. A.; Plashkin, V. S.; Sokolov, S. V.

ORG: Ural Polytechnic Institute im. S. M. Kirov (Ural'skiy politekhnicheskiy institut) 28
BTITLE: A study of preparative methods and properties of fluoroorganic compounds.
III. Perfluorodialkylcyclohexylamines 1/4/8

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 532-537

TOPIC TAGS: fluoroamine, fluorination, electrochemical halogenation

ABSTRACT: The authors investigated the electrochemical fluorination of dimethylamine and diethylaniline. Various factors affecting the process were discussed. It was demonstrated that perfluorodialkylcyclohexylamines react with anhydrous aluminum chloride to form polyfluorochloroimines:

 $\text{R} = \text{F(I)}, \text{CF}_3(\text{II})$; $\text{R}' = \text{Cl(IVa, IVb)}$, $\text{CF}_3(\text{V})$.

Card 1/2

UDC: 546.16:541.138:547.551+547.446

L 21497-66

ACC NR: AP6009158

Hydrolysis of the chloroimines with concentrated sulfuric acid yields perfluorocyclohexanone. Hydrolysis of the chloroimines with aqueous alkali leads to the formation of omega-hydroperfluorocaproic acid, a haloform reaction product of perfluorocyclohexanone. Orig. art. has: 2 tables. [vs]

SUB CODE: 07 / SUBM DATE: 07Apr65 / ORIG REF: 003 / OTH REF: 005 / ATD PRESS: 4222

Card 2/2 dde

ACC NR: AP6026694

SOURCE CODE: UR/0181/66/008/008/2420/2426

AUTHOR: Mazalov, L. N.; Blokhin, S. M.; Vaynshteyn, E. Ye.

ORG: Institute of Inorganic Chemistry, SO AN SSSR, Novosibirsk (Institut neorganicheskoy khimii SO AN SSSR)

TITLE: Certain band-structure features of solids in x-ray spectra

SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2420-2426

TOPIC TAGS: x ray spectrum, alkali halide, spectral fine structure, titanium oxide, absorption coefficient, K band, L band

ABSTRACT: The relationship between the positions of the extremal points of the band structure and fine structure of x-ray absorption by atoms in solids is studied. To determine to what degree general ideas agree with the theory, a study is made of the fine structure of the K and L atomic spectra of alkali halide crystals, namely the X and L absorption edges of potassium and chlorine in KCl. The characteristic points of the resulting curves are discussed and related to specific transitions. The maxima and minima of potassium and chlorine are interpreted. A comparison is made in a table of the fluctuation of the absorption coefficient in the K and L spectra of chlorine and potassium with the characteristic points of the band structure of KCl. Satisfactory

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ACC NR: AP6026694

results were obtained also for the L_{III} spectra of strontium and the K spectra of titanium in SrTiO₃, the K spectra of calcium and boron in CaB₆, as well as the cubic and hexagonal lower oxides of titanium. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 20,07/ SUBM DATE: 12Jul65/ ORIG REF: 010/ OTH REF: 017

Card 2/2

MAZALOV, L.P.

Electromagnetic drive for fans. Avt.prom. no.3:18 Mr '61.
(MIRA 14:3)

1. Minskiy avtozavod.
(Automobiles—Engines—Cooling)

MAZLOVA, M.F.

Practical significance of prothrombin time and the hemocoagulogram in detecting hepatic insufficiency in liver cirrhosis.
Trudy LSGMI 39:325-332 '58. (MIRA 12:8)

1. Kafedra fakul'tetskoy khirurgii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - prof. P.N.Napalkov).

(LIVER CIRRHOSIS, blood in, coagulation tests, diag. value in assoc. hepatic insuff. (Rus))

(BLOOD COAGULATION, in var. dis. liver cirrhosis with hepatic insuff., diag. value (Rus))

KOROTONOSHKO, N.I., kandidat tekhnicheskikh nauk; MAZALOV, N.D., kandidat
tekhnicheskikh nauk; TRUSOV, S.M.

Stand testing of one-stage four-wheel hydraulic transmission systems.
Avt.i trakt.prom.no.12:14-17 D '56. (MLRA 10:2)

1. Nauchno-issledovatel'skiy avtomobil'nyy institut.
(Automobiles—Transmission devices)

RYBAKOV, B.V. Prinimali uchastiye: TOLOKONNIKOV, M.I.; BASHMACHNIKOV, S.I.; SMIRNOV, A.K.; KHOMUTOV, A.I.; SHAMANINA, V.I.; SHIBAYEV, Z.K. BABAKOV, N.A., doktor tekhn.nauk, red.; MAZALOV, N.D., kand.tekhn.nauk, red.; SOBOLEVVA, N.M., tekhn.red.

[Automatic and remote control in the national economy] Avtomatika i telemekhanika v narodnom khoziaistve. Pod red. N.A.Babakova i N.D.Mazalova. Moskva, Vses.in-t nauchn.itekhn.informatsii, 1960.
226 p.

(Automatic control)

(Remote control)

(MIRA 13:10)

SCKOLOV, S.V.; MAZALOVA, Z.I.; MAZALOV, S.A.

Methods of preparation and properties of organofluorine compounds.
Part 2: Some new perfluorinated acids and their derivatives.
Zhur. ob. khim. 35 no.10:1774-1778 O '65. (MIRA 18:10)

S/079/62/032/008/002/006
D204/D307

AUTHORS:

Postovskiy, I. Ya., Pushkina, L.N. and
Mazalov, S. A.

TITLE:

Investigations of benzazoles. I. Synthesis
of benzoazoles in order to study their
scintillating properties

PERIODICAL:

Zhurnal obshchey khimii, v.32, no. 8, 1962
2617 - 2624

TEXT:

Synthesis of 2-arylbenzoazoles (I), 1 -
(2'-benzoazolyl) - 2 arylethylenes (II) and 1 - phenyl - 1 -
(2'-benzoazolyl) - 2-arylethylenes (III) are described. 25 of
the compounds prepared are new. Series I was produced by the oxi-
dation of o-aminophenol azomethynes with KMnO₄ in acetone, at
room temperature, in 60 - 80 % yields. 2-(9' - Acridyl)-benzoa-
zole was made by the oxidation of its azomethyne with boiling PhNO₂
o-aminophenol with 1-naphthyl-methane by the condensation of
1-naphthylacetic acid, by heating to 180 - 190°C

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S/079/62/032/008/002/006
D204/D307

Investigations of benzazoles. I...

for 5 hours. Compounds II were obtained, in 7 - 70 % yields, by the condensation of equimolar mixtures of the corresponding aromatic aldehydes and 2-methyl-benzoxazole, in the presence of H_3BO_3 , at 195 - 200°C, over 5 hours. Reactivity of the above aldehydes depended strongly on the nature of the *para*- substituent, decreasing in the transition from halogen and alkyl groups to methoxy- and dialkylamino- substituents. Series III was synthesized (in 20 - 60 % yields) by a method analogous to II, replacing the 2-methyl- by 2-benzyl- benzoxazole. Uv absorption spectra, measured on C_F-4 (SF-4) spectrophotometer, showed that extension of the conjugated chain in the presence of electron-donating constituents displaced the maximum absorption peaks towards longer wavelengths. It was also shown that the structures of 1-(2'-benzoxazolyl)-1-phenyl-2-aryl-ethylene and of compounds III are not coplanar. More detailed spectral and luminescence studies, and certain scintillating characteristics will be published in a later paper. There are 4 figures and 3 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S.M. Kirova
(The Urals Polytechnical Institute imeni S.M. Kirov)

Card 2/3

S/079/62/032/008/003/006
D204/D307

AUTHORS: Pushkina, L. N., Mazalov, S. A. and Postovskiy, I. Ya.

TITLE: Investigations of benzazoles. II. Synthesis of benzimidazoles in order to study their scintillating properties

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 8, 1962
2624 - 2633

TEXT: The authors synthesized 2-aryl-benzimidazoles (I), 1-phenyl- and 1-methyl-2-aryl-benzimidazoles (II and III), 1-benzyl-2-aryl-benzimidazoles (IV), and 1-benzimidazolyl-2-aryl-ethylenes (V, VI, VII), to study their optical and scintillating properties and to compare them with benzoazoles described in Part I (ZhOKh, this issue, pp. 2617 - 2624). 41 of these compounds are new. They were prepared, in 60 - 80 % yields, by the condensation of o-phenylenediamine with aromatic acids in the presence of H_3BO_3 , at 190 - 200°C over 4 hours, under CO_2 ; some were also obtained ✓

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S/079/62/032/008/003/006
D204/D307

Investigations of benzazoles. II. ...
by the reaction of o-phenylene diamine with aldehydes. II and III were synthesized, in 40 - 90 % yields, by the 1:1 condensation of aromatic aldehydes with N-phenyl- and N-methyl-o-phenylenediamines and oxidation of the resultant Schiff's bases with PhNO₂. IV were obtained by the interaction of o-phenylene diamine (1 mole) and aldehydes (2 moles), in acetic acid, at room temperature, in 30 - 80% yields. V, VI and VII were prepared by the 1:1 condensation of aldehydes with (a) 2-methyl-, (b) 1,2-dimethyl-, and (c) 2-benzyl-benzimidazoles, in the presence of H₃BO₃, at 195 - 200°C, over 2.5 hours, in 70 - 80 (V), 35 - 65 (VI) and 70 - 80 (VII) percent yields respectively. The reactivity of the H-atoms in the methyl group of 2-methyl-benzimidazole (A) was greater than that of 2-methyl-benzoxazole (B), owing to their higher mobility. Uv absorption spectra of phenyl-, p-halogenophenyl-, p-tolyl-, and p-methoxy-phenyl- benzimidazoles exhibited maxima at 300 - 310 m μ . Diphenyl- and 1-naphthyl- derivatives showed peaks at 315 and 337 m μ , and those of p-dimethyl- and p-diethylaminophenyl- at 330 and 337 m μ . Spectra of 1-substituted 2-aryl-benzimidazoles showed the absence of conjugation between the N-substituents and the remainder of the molecule. The structures VII

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S/079/62/032/008/003/006

D204/D307

Investigations of benzazoles. II. ...
are not coplanar. There are 1 figure and 3 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Urals
Polytechnical Institute)

SUBMITTED: August 1, 1961

✓

Card 3/3

MAZALOV, S.A.; GERASIMOV, S.I.; SOKOLOV, S.V., ZOLOTAYIN, V.I.

Methods of production and properties of organofluorine
compounds. Part 1: Electrochemical method of production
of perfluorinated tertiary heterocyclic amines. Zhur. ob.
khim. 35 no.3:485-489 Mr '65. (MIRA 18:4)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova.

SOKOLOV, S.V.; MAZALOV, S.A.; GERASIMOV, S.I.

Reaction of tertiary perfluorinated amines with aluminum chloride.
Synthesis of perfluorocyclohexanone. Zhur. VKHO 10 no.2:234-235
'65. (MIRA 18:6)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

SOKOLOV, S.V.; MAZALOV, S.A.

Opening of the cycle and the inverse cyclization of perhalogenized
amines under the effect of aluminum and antimony halides. Dokl. AN
SSSR 162 no.5:1071-1074 Je '65. (MIRA 18:7)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova. Submitted
December 4, 1964.

MAZALOV, Valentin Vasil'yevich; GOLUBEVA, T.M., red.; FREGER, D.P.,
red.izd-va; GVIPTS, V.L., tekhn. red.

[Products made of combined wood plastics for construction]
Izdelia iz kombinirovannogo drevesnogo plastika dlia
stroitel'stva. Leningrad, 1963. 29 p. (MIRA 16:5)
(Wood, Compressed)

VOYTCOVSKIY, Viktor Nikolayevich; MATALEV, Ievganiy Vasil'yavich;
AZAROV, E.K., red.; LEVOMEVSKAYA, L.G., tekhn.red.

[Leningrad industry in the seven-year plan] Leningradskaya
promyshlennost' v semiletke. Leningrad, Lenizdat, 1960. 42 p.
(MIRA 14:3)

(Leningrad Economic Region--Industries)
(Leningrad Economic Region--Economic policy)

PHASE I BOOK EXPLOITATION

SOV/5358

Lavrikov, Yuryi Aleksandrovich, and Yevgeniy Vasil'yevich Mazalov, Candidates
of Economic Sciences
Leningradskaya promyshlennost' i yeye rezervy (The Industry of Leningrad and
Its Reserves) [Leningrad] Lenizdat, 1960. 158 p.
Errata slip inserted. 3,000 copies printed.

Eds.: E. K. Azarov and L. M. Pitkin; Tech. Ed.: L. G. Levonevskaya.

PURPOSE: This book is intended for the Communist Party personnel, students
and teachers of economics, and industrial workers.

COVERAGE: The book describes methods of exploiting production chiefly in
machinery manufacturing reserves in the Leningrad area. Attention is given
to raising the productivity of labor, based on the use of progressive methods,
its standardization, improved organization of work, a sound wage structure,
and the further development of socialist competition. In addition to internal

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The Industry of Leningrad (Cont.)

SOV/5358

literature references, the authors drew from materials available in the Leningrad Council of National Economy and local industrial establishments. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

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Ch. I. The Industry of Leningrad and Expected Development During the Seven-Year Period (1959-1965)	9
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Ch. III. Raising the Engineering Standard and Perfecting the Organization of Production Are the Main Ways of Raising Labor Productivity	54

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The Industry of Leningrad (Cont.)

SOV/5358

Ch. IV. Perfecting the Standardization of Labor, and Organizing Wages.
Socialist Competition and the Propagation of Advanced Experience 120

Conclusions

151

AVAILABLE: Library of Congress

AC/dwm/bc
8-17-61

Card 3/3

YE. V. MAZALOV

Leningrad industry and its reserves, by Yu. A. Lavrikov and Ye. V. Mazalov.
New York, USJPRS, 1961.

124 p. charts, graphs, tables. (JPRS: 8796; CSO: 6107-D)

Translated from the original Russian: Leningradskaya promyshlennost'
i yeeye rezervy, Leningrad, 1960.

MAZALOV, Ye.V.; LAVRIKOV, Yu.A.; KUZNETSOV, A.P.; VELIKANOV, A.Ye.,
kand. ist. nauk, starshiy nauchnyy sotr., nauchnyy red.;
AZAROV, E.K., red.; LEVONEVSKAYA, L.G., tekhn. red.

[On the road to technological progress, from the work
experience of the Leningrad party organization, 1951-1961]
Na putiakh tekhnicheskogo progressa; iz opyta raboty Leni-
gradskoi partiinoi organizatsii, 1951-1961 gg. [By] E.V. Mazolov,
i dr. Leningrad, Lenizdat, 1962. 480 p. (MIRA 16:2)

1. Leningrad. Institut istorii partii. 2. Institut istorii .
partii pri Leningradskom oblastnom komitete Kommunisticheskoy
partii Sovetskogo Soyuza (for Velikanov).
(Leningrad Province—Industrial management)
(Communist Party of the Soviet Union--Party work)

MAZALOV, Yevgeniy Vasil'yevich; LAVRIKOV, Yu.A.; KUZNETSOV, A.P.

[Along the paths of technical progress; from the work
of the Leningrad party organization, 1951-1961] na pu-
tiakh tekhnicheskogo progressa; iz opyta raboty lenin-
gradskoi partiinoi organizatsii, 1951-1961 gg. Lenin-
grad, Lenizdat, 1962. 480 p. (MIA 17:10)

ACCESSION NR: AT4036066

S/2761/63/000/003/0237/0250

AUTHORS: Azovskiy, Yu. S.; Guzhovskiy, I. T.; Mazalov, Yu. P.; Mank, V. V.; Safronov, B. G.; Churayev, V. A.

TITLE: Inductive conical plasmoid source

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 237-250

TOPIC TAGS: plasmoid, plasma source, plasma radiation, plasma research, microwave plasma, charged particle concentration, plasma density, ionized plasma

ABSTRACT: An inductive plasmoid source with a conical single-turn coil was investigated, and the plasmoids produced by it were studied

Cont: 1/4

ACCESSION NR: AT4036066

by recording the visible radiation of the plasmoids with a photomultiplier and by recording the plasmoid currents with magnetic probes. The plasmoid velocity was determined from the Doppler effect produced when microwave radiation is reflected from the front of the plasmoid. The charged-particle density in the plasmoid was determined by the microwave-signal "cutoff" method (I. S. Shpigel', ZhETF, 36, 411, 1959), and the mass composition of the plasmoid was determined with a Thomson mass analyzer (parabola method). The conclusions drawn from the results are as follows: 1. The sources produce hydrogen plasmoids with density exceeding $2 \times 10^{14} \text{ cm}^{-3}$ at an average velocity $3 \times 10^5 \text{ m/sec}$ (450 eV) and a total number of particles 10^{19} (approximately 0.5 cm^3). The total plasmoid energy is of the order of 1,000 J (25% of the energy fed to the coil and 8% of the capacitor-bank energy). The currents circulating in the plasmoids are of the order of 10^4 A and attenuate far away from the source. The plasma impurities amount to about 10% (only 1% in the front part of the plasmoid) and the plasmoid length is relatively

Card 2/4

ACCESSION NR: AT4036066

large (6--8 meters). The source efficiency can be increased by pre-ionization of the neutral gas. "The authors are grateful to Ye. F. Malayev for help in the erection of the apparatus, to I. Yu. Adamov, A. I. Skibenko, and V. I. Privezentsev for measuring the particle density, and to V. S. Voynitsena for useful advice in the mass analysis of the plasmoids. Orig. art. has: 10 figures, 1 formula, and 2 tables.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 21May64

ENCL: 01

SUB CODE: ME

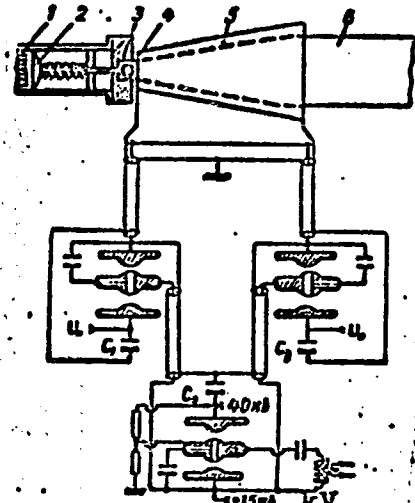
NR REF SOV: 008

OTHER: 011

Cord 3/4

ACCESSION NR: AT4036066

ENCLOSURE: 01



Schematic diagram of installation:

- 1 - valve coil,
- 2 - valve anvil,
- 3 - teflon gasket,
- 4 - valve cap,
- 5 - conical coil,
- 6 - glass tube

Card 4/4

AZOVSKIY, Yu.S.; GUZHOVSKIY, I.T.; MAZALOV, Yu.P.; MANK, V.V.; SAFRONOV, B.G.;
CHURAYEV, V.A.

Conical induction source of plasma bunches. Zhur. tekhn. fiz.
33 no.10:1149-1158 0 '63. (MIRA 16:11)

10-2/ENG(n) ID(-) AT SOURCE CODE: UR/3137/64/000/049/0001/0013
AUTHOR: Azovskiy, Yu. S.; Guzhovskiy, I. T.; Maxalov, Iu. P.; Pistryak, V. N.
ORG: Academy of Sciences UkrSSR, Fiziko-tehnicheskiy institut (Akademiya nauk UkrSSR,
Fiziko-tehnicheskiy institut. Doklady, no. 049/P-008, 1964.
TITLE: Motion of plasmoids in field-free space
SOURCE: AN UkrSSR. Fiziko-tehnicheskiy institut v svobodnom ot polya prostranstve, 1-13
Odvizheni plazemnykh sputkov v svobodnom ot polya prostranstve, 1-13
TOPIC TAGS: plasmoid acceleration, plasma diagnostics, hydrogen plasma
ABSTRACT: The speed of current sheets of a given density was determined by observing the main part of a plasmoid which moves in field-free space. After the ejection of a plasmoid from the source, it initially moved into a glass tube of 9 cm diameter. Hydrogen was used in the experiment. In the present experimental conditions, the first dense plasmoid ejected was then into an organic glass tube of 18 cm diameter. Hydrogen was used in the experiment. It occurred during the third half-period of the discharge. Sheets of different densities move with different speeds; those of lower density are faster. With the increase of retardation (neutral gas injection into the source) the speeds of both sheets decrease. The greatest delay occurs in the small diameter glass tube. This results in a decrease of the curvature of the plasmoid front. The motion of

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L 8907-66

ACC NR: AT5022289

9

sheets was measured by the microwave reflection doppler effect. The use of the speed of sound in plasma to characterize plasmoid thermal expansion is discussed. In conclusion the authors express their gratitude to B. G. Safronov and N. A. Khizhnyak for reviewing the results and to R. V. Akhmerov for his help in setting up the experiment. Orig. art. has: 8 figures, 1 table, 6 formulas.

SUB CODE: 20/

SUB DATE: none

ORIG REF: 003/

OTH REF: 003

44,55

44,55

44,55

PC
G-1 2/2

L-23811-65 EWT(1)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEG(t)/T/EEL(b)-2/EWA(m)-2
Pz-6/Pz-4/Pab-10/Pi-4 IJP(c) AT

ACCESSION NR: AP5000835

S/0057/64/034/012/2129/2134

AUTHOR: Azovskiy,Yu.S.; Guzhovskiy,I.T.; Mazalov,Yu.P.; Pistryak,V.M.

TITLE: Interaction of plasma bursts with an axially symmetric magnetic field. 2.

SOURCE: Zhurnal tehnicheskoy fiziki, v.34, no.12, 1964, 2129-2134

TOPIC TAGS: plasma interaction, plasmoid, magnetic field plasma effect, plasma diffusion

ABSTRACT: The present study was a continuation of earlier work (K.D.Sinel'nikov, Yu.S.Azovskiy, I.T.Guzhovskiy, V.Ye.Panchenko and B.G.Safronov, ZhTF 33,10,1963) devoted to investigation of the interaction of plasma bursts with an axially symmetric magnetic field. As compared to the earlier work, in the present study there were used purer hydrogen plasma bursts, produced by a conical source with pulsed gas injection. Primary attention was given to the interaction of the bursts with an inhomogeneous field (only preliminary measurements were made in a uniform field). The theoretical aspects of the phenomenon are reviewed briefly. The apparatus was basically the same as in the earlier work. Typical oscillograms of the signals from the magnetic probe are reproduced. These indicate the distribution of the field and

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L 23811-65

ACCESSION NR: AP5000835

current over the length of the burst; the initial density of the bursts was evaluated by the microwave cutoff technique. The results are presented in the form of curves characterizing the induced current versus the position of the burst in the magnetic field, the value of the induction coefficient versus the position of the burst, the density and radius of the burst versus its position, the position of the burst versus time, the radial density distribution of the particles in the burst, the variation of the "vacuum" magnetic field, the induced current field and their ratio in function of the field at the center of the solenoid, and the variation in the density and radius of the burst in function of the magnetic field. It is tentatively concluded that under the given experimental conditions the diffusion of the plasma is not anomalously rapid (measurements in a much larger field region are necessary to confirm this). "In conclusion, the authors express their deep gratitude to K.D.Sinel'nikov, N.A.Khizhnyak and B.G.Safronov for discussion of the experimental results." Orig.art.has: 7 figures.

ASSOCIATION: none

SUBMITTED: 20Dec63

NA REF SCV: 007

ENCL: 00

OTHER: 000

SUB CODE: ME

2/2

L 23814-65 EWT(1)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2
Pz-6/Po-4/Pab-10/Pi-4 IJP(c) 4T

ACCESSION NR.: AP5000836

S/0057/64/034/012/2135/2139

AUTHOR: Azovskiy, Yu.S.; Akhmerov, R.V.; Guzhovskiy, I.T.; Mazalov, Yu.P.; Fistrivak, V.M.

TITLE: Interaction of plasma bursts with an axially symmetric magnetic field. 3.

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.12, 1984, 2135-2139

TOPIC TAGS: plasma interaction, plasmoid, magnetic field plasma effect, plasma diffusion

ABSTRACT: In the present work, as in the study described previously (preceding article in this issue of the journal (p.2129) - see Abstract ACC.NR:AP5000835), there was investigated the interaction of plasma bursts with an inhomogeneous magnetic field, the difference being that in the present work there were used denser bursts ($n > 10^{14} \text{ cm}^{-3}$). The experimental setup is diagrammed in the Enclosure. The two series-connected coils were located 50 cm from the source and produced a double hump field. The source was filled with either 100% hydrogen or 75% H and 25% He; in both cases each gas injection equalled 3 cm^3 (atmospheric pressure). The source was triggered 6 millisecond after switching on the magnetic field, so that the burst interacted with the maximum field. The following equipment was used to measure the burst

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L 23814-65

ACCESSION NR: AP5000836

parameters incident to the interaction: a photomultiplier (usually an FEU-19) to detect the integral radiation, and ISP-51 spectrograph with a short-focus camera for photographing the plasma radiation spectrum, an ISP-51 spectrograph with a long-focus camera for following the behavior of individual spectrum lines and the continuous radiation, a high-speed photographic device for recording the radial compression of the burst, and a magnetic probe for recording the current induced in the burst. The photomultiplier and probe output signals were displayed on an oscilloscope. Some typical oscilloscopes are reproduced. The experimental results are presented mainly in the form of curves giving the variation of the burst radius, density and electron temperature as a function of the magnetic field and the variation of the position of the injected bursts and reflected shock wave with time. With arrival of successive plasma bursts in the nonuniform field region there builds up a "cushion", resulting in a shock wave propagating in the opposite direction to the plasma stream. "In conclusion, the authors express their gratitude to K.D.Sinel'nikov, N.A.Khizhyan and B.G.Safronov for discussion of the results, to V.G.Padalke for useful advice, and to V.Y.Gaydukov who participated in some of the preliminary experiments." Orig.art.has: 6 figures.

2/4

L 23814-65

ACCESSION NR: AP5000836

ASSOCIATION: none

SUBMITTED: 20Dec63

ENCL: 01

SUB CODE: ME

NR REF Sov: 003

CIPHER: 002

3/4

L 23814-65

ACCESSION NR: AP5000836

ENCLOSURE: 01

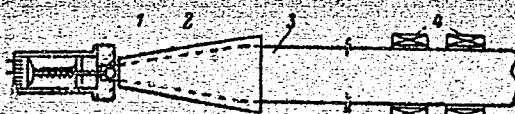


Diagram of the setup: 1 - valve, 2 - induction cone source, 3 - glass tube (9 cm inside diameter), 4 - magnetic coils

4/4

L 43914-66 EWT(1) IJP(c) AT/GD
ACC NR: AT6020403 (N)

SOURCE CODE: UR/0000/65/000/000/0068/0076

AUTHOR: Azovskiy, Yu. S.; Guzhovskiy, I. T.; Mazalov, Yu. P.; Pistryak, V. M. 62
ORG: none B71

TITLE: Interaction of plasmoids with an axially-symmetrical magnetic field. II.
SOURCE: AN UkrSSR. Issledovaniye plazmennykh sgustkov (Study of plasma clusters).
Kiev, Naukova dumka, 1965, 68-76

TOPIC TAGS: plasmoid, plasma interaction, plasma magnetic field, plasma injection,
plasma density

ABSTRACT: The first part of this paper was published in ZhTF v. 33, 10, 1963. Unlike in the earlier investigation, pure hydrogen plasmoids were used produced by a chemical source with pulsed inlet of gas (described by the authors in ZhTF v. 34, 841, 1964). The main purpose was to determine the interaction of the plasmoid and plasmoids for which the adiabatic conditions are not satisfied. The apparatus and the test procedure are described. The tests yielded plots of the dependence of the density and radius of the plasmoid on the position of the plasmoid in the magnetic field, the dependence of the position of the plasmoid on the time, and the radial distribution of the particles in the plasmoid, the dependence of the vacuum magnetic field, the induced-current field, and their ratio on the vacuum magnetic field at the center of the solenoid, and the dependence of the radius and density on the magnetic

Card 1/2

L 43914-66

ACC NR: AT6020403

field. While most of the results can be reconciled with the qualitative theoretical descriptions of this phenomenon published by others, the plasmoid exhibited an unexpected acceleration in the region beyond the point corresponding to the maximum current. It is noted in conclusion that the results differ greatly from the earlier investigation, primarily because the plasma used there consisted essentially of heavy carbon and oxygen ions. The maximum compression rate in the magnetic field was produced where the magnetic field had a maximum gradient. The induced current first increased with the field, and then more rapidly than the field. However, once the plasmoid has been radially compressed, the induced current began to decrease rapidly. A noticeable crowding out of the magnetic field was observed, causing the axial field in the plasma to drop to about 15% of the vacuum field. The induction of the current was accompanied by a certain slowing down of the plasmoid motion, thus indicating that the translational energy was converted partially into radial and rotational energy. Orig. art. has: 9 figures.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 006

Card 2/2 pb

L 43913-66 EWT(1) IJP(c) AT/GD
ACC NR: AT6020404

(N)

SOURCE CODE: UR/0000/65/000/000/0076/0

AUTHOR: Azovskiy, Yu. S.; Akhmerov, F. V.; Guzhovskiy, I. T.; Mazalov, Yu. P.;
Pistryak, V. M.

66
B+1

ORG: none

TITLE: Interaction of plasmoids with an axially-symmetrical magnetic field. III.

SOURCE: AN UkrSSR. Issledovaniye plazmennykh sgustkov (Study of plasma clusters).
Kiev, Naukova dumka, 1965, 76-84

TOPIC TAGS: plasmoid, plasma interaction, plasma magnetic field, plasma density,
plasma shock wave, plasma injection, plasma radiation

ABSTRACT: This is a continuation of the preceding article in the same source (Acc. Nr. AT6020403), which in turn is a continuation of an article published in ZhTF v. 33, 10, 1963. In this part of the investigation, a denser plasma was used ($n > 10^{14}$ cm $^{-3}$), and the plasma diagnostics was essentially by optical means (photomultipliers, spectrographs, and high-speed camera). The plasma was produced by a conical source, propagated through a glass tube, and interacted with a magnetic field produced by coils located 50 cm from the source (Fig. 1). The time-integrated radiation spectrum was photographed near the maximum magnetic field gradient (directly ahead of ^4He coils) and in the region of the homogeneous field (between the coils). The plasma was either pure hydrogen or 75% hydrogen and 25% helium. The results show that the integral radiation, the continuous radiation, and the radiation of the helium and the

Card 1/2

L 439, J-50

ACC NR: AT6020404

impurities had the same character, whereas the glow due to the hydrogen was much longer. The latter is due to the longer recombination time of the hydrogen. An increase in the magnetic field increased all the components of the radiation (approximately by 3 times as the field increased from 0 to 0.2 - 0.3 Tesla), after which the increase slowed down. Measurements were also made of the dependence of the radius, density, and electron temperature of the plasmoid as functions of the analytic field and the dependence of the position of the injected plasmoid and the reflected shock wave in the plasma as functions of the time. Attention is called to the fact that at fields up to 0.20 - 0.25 Tesla all the plasmoids are compressed to an equal degree, but at larger magnetic fields only the first plasmoid is compressed, and the others are not. This is related to the occurrence of a shock wave at stronger magnetic fields. Orig. art. has: 6 figures.

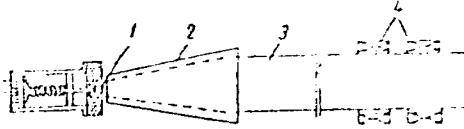


Fig. 1. Diagram of setup. 1 - Valve,
2 - induction source, 3 - glass tube,
4 - magnetic coils.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 003/ OTH REF: 002

Card 2/2 PB

L 41069-66 EWI(1) LPI(c) GD/AI
ACC NR: AT6020419 (N)

SOURCE CODE: UR/0000/65/000/000/0203/0212

AUTHOR: Azovskiy, Yu. S.; Guzhovskiy, I. T.; Mazalov, Yu. P.; Pstryak, V. M.

55
P241

ORG: none

TITLE: Plasmoid motion in a field-free region

SOURCE: AN UkrSSR. Issledovaniye plazmennykh sgustkov (Study of plasma clusters).
Kiev, Naukova dumka, 1965, 203-212

TOPIC TAGS: plasmoid, plasma generator, plasma density

ABSTRACT: Plasma expansions in a field-free region were investigated by observing the density and energy profile of the plasma. A theoretical review of a simple plasma configuration is given and compared with the experimental results. The plasma was generated by a conical electrodeless discharge and injected into a 250 cm tube. The measurements were limited to the third and densest plasmoid (10^{11} cm^{-3} to 10^{12} cm^{-3}). The density distribution at any time was measured with a microwave interferometer. The measurements of ion and electron velocities and temperatures in all three dimensions are tabulated and the weak dependence on the initial density and type of expansion of these quantities is pointed out. A rather strong effect of neutral gas density became apparent from studying the expansion parameters as a function of the delay between the neutral gas injection into the plasma generator and the discharge of the capacitors to pro-

Card 1/2

L 41069-56

ACC NR: AT6020419

duce the plasma. However, the theoretical predictions indicate that the experimental results can serve as an estimate of plasma expansion. Orig. art. has: 6 formulas, 5 figures, 1 table.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 005/ OTH REF: 003

Card 2/2 *lh*

Pg-4/Pt-4/Pk-4/F1-4 IJP(c) MM/AT

ACCESSION NR: AP5010802

UR/0057/65/035/004/0643/0649

AUTHOR: Azovskiy, Yu.S.; Guzhovskiy, I.T.; Mazalov, Yu.P.; Pistryak, V.M.

TITLE: On the motion of plasma bursts in field free space

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 643-649

TOPIC TAGS: plasma, plasmoid, velocity measurement, doppler effect, expanding gas, electron temperature

ABSTRACT: The authors have measured the velocities of plasma bursts from a conical plasma gun by means of the Doppler effect. Two different frequencies were employed (3.2 and 9.0 Gc/sec); the measured velocities therefore correspond to the motions of two different density regions within the burst. The plasma bursts were produced by the 28 KV discharge of a 27 μ f capacitor through a conical plasma gun containing approximately 3 cm^3 of hydrogen, and traveled in a 9 cm diameter 50 cm long glass tube and subsequently in a 18 cm diameter 200 cm long plastic tube. The measured motions of the two particle density regions (1.1×10^{11} and $1.1 \times 10^{12} \text{ cm}^{-3}$) are presented graphically. A theory of a freely expanding plasma is briefly developed for both the one- and three-dimensional cases. This theory was employed to

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L 49258-63

ACCESSION NR: AP5010802

3

calculate from the measured velocities the velocity of the center of gravity of the burst and the sum of the ion and electron temperatures. Because of the uncertainty concerning several factors involved in the calculation, the calculated value of 5 eV for the sum of the electron and ion temperatures is regarded as in satisfactory agreement with the value of 8 eV previously obtained for the electron temperature in similar plasma bursts from the intensity ratio of the HeI 4921 and HeI 4713 lines (Yu.S.Azovskiy et al., ZhTF, 34, 2135, 1964). "In conclusion, the authors express their gratitude to B.G.Safronov and H.A.Khizhnyak for discussing the results of the work, and to R.V.Akhmerov for participating in the preparation of the experiment."

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001033120008-3

work, and to R.V.Akhmerov for participating in the preparation of the experiment."
Orig. art. has: 7 formulas, 6 figures, and 1 table.

ASSOCIATION: None

COMMITTED: 11Jun84

ENCL: 00

SUB CCR: ME

No RKF Sov: 005

OTHER: 003

Card 3/2

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001033120008-3"

L 2494-66 EWT(1)/ETC/EPF(n)-2/EMI(m)/EPA(w)-2
ACCESSION NR: AP5020736

LJP(c) AT

UR/0057/65/035/008/1405/1407

AUTHOR: Asovskiy, Yu. S.; Gukhovskiy, I. T.; Manalov, Yu. P.; Pigtryak, V. M.

TITLE: On the motion of plasma bursts in a uniform axially symmetric magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1403-1407

TOPIC TAGS: plasmoid, magnetic field plasma effect, plasma temperature, plasma density, homogeneous magnetic field

ABSTRACT: The authors have continued their previous investigation of the motion of plasma bursts in axially symmetric fields (ZhTF, 34, No.12, 1964). The work reported here concerns mainly the motion of the plasmas in the uniform portion of the field. The apparatus is described in the previous paper. The plasmas had charged particle densities of about $2 \times 10^{13} \text{ cm}^{-3}$ and velocities near $6 \times 10^6 \text{ cm/sec}$, and contained 10% of heavy ions. The gas pressure within the plasmas was measured with a compensated magnetic probe of the type described by F.Waelbroeck et al. (Nuclear fusion, Suppl. 2, 675, 1962) and the diameters of different sections of the plasmas were measured with a pulsed plasmoscope consisting of a light-shielded 7 cm diameter scintillator with control grids. The variations of the

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L 2494-66

ACCESSION NR: AP 5020726

duration of the magnetic probe signal, the charged particle density, and the plasma temperature as the plasma drifts in the uniform field are shown graphically for different values of the magnetic field strength. As the plasma moved down the field its length increased, its radius remained practically unchanged, and its temperature and charged particle density decreased. The possibility of a decrease of temperature during longitudinal expansion of a plasma in a magnetic field has been pointed out by F.Waelbroeck et al. (loc. cit.) and by F.R.Scott and O.C. Elidride (Phys. Fluids, 4, 1558, 1961). Orig. art. has: 3 formulas and 3 figures.

ASSOCIATION: none

SUBMITTED: 28Dec64

NR REF Sov: 004

ENCL: 00

SUB CODE: ME

OTHER: 002

(b6)
Card 2/2

MAZALOVA, M.F.
MAZALOVA, M.F.

Comparative evaluation of functional liver tests (prothrombin,
sugar & Quick-Pitel) in surgical patients [with summary in English].
Khirurgija 33 no.11:52-59 N '57.
(MIRA 11:2)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. P.N.
Napalov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo
instituta.

(LIVER FUNCTION TESTS
comparative evaluation in determ. of liver insuff. in
surg. patients (Rus))

MAZAL-VA, M.F., Cand. med. sci -- (dis) "Comparative evaluation
of the prothrombin ~~area~~^{test} in comparison with the sugar ~~area~~^{test}
and the ~~area~~^{test} of Fibrinogen in surgical practice." Len, 1966
15 pp (Min of Health Rep n. Len Sanitary Hygiene Med Inst) 20
copies (41, 17-5n, 117)

- 212 -

MIZALOVA, N.N., assistent

Local fibrous osteodystrophy (osteoblastoclastoma) of the maxillofacial bones. Stomatologija 37 no.5:44-48 S-0 '58
(MIRA 11:11)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - dotsent M.V. Paradoksov) stomatologicheskogo fakul'teta Tashkentskogo meditsinskogo instituta (dir. - dotsent A.G. Galamov).
(JAWS--TUMORS)

MAZALOVA, N. N., Cand Med Sci (diss) -- "Local fibrotic osteodystrophy (osteoblastoklastoma) of the maxillo-facial bones". Tashkent, 1960. 10 pp
(Min Health Uzbek SSR, Tashkent State Med Inst), 400 copies (KL, No 15, 1960,
140)

MAZALOVA, N.N., assistent

Methods for the treatment of adamantinomas. Med. zhur. Uzb. no.3:
72 Mr '60. (MIA 15:2)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - dotsent M.V.
Paradoksov) Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(J.A.S.TUMO.W)

MAZALCVA, N.N., assistent

Case of metastatic spreading of tissue of the thryoid gland into
the mandible. Med. zhur. Uzb. no.5:71-72 My '61. (MIRA 14:6)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - dotsent M.V.
Paradoksov) Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(THYROID GLAND--TUMORS) (JAWS)

PARADOKSOV, M.V., dotsent; MAZALOVA, N.N., kand.med. nauk

Case of congenital myosarcoma of the tongue. Stomatologija 42
no.2:102-103 Mr-Ap'63 (MIRA 17:3)

1. Iz kafedry khirurgicheskoy stomatologii (zaveduyushchiy
dotsent M.V. Paradoksov) - kafedry patologicheskoy anatomii
(zaveduyushchiy prof. G.N. Terekhov) Tashkentskogo meditsinskogo
instituta.

MALZAVA, M. M.

Effect of magnesium fertilizers on seed quality. M. M. Malzava
Agrobiologiya, 1954, No. 4, 125-129).—In pot trials with millet,
water-melon and maize Mg increased yields, improved seed quality
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AUTHOR: Mazalova, T. G.; Shalabutov, Yu. K.

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TITLE: Investigation of the thermoelectric power of aluminum oxide with alkali-earth-metal impurities

SOURCE: *Leningrad. Politekhnicheskiy institut. Trudy, no. 255, 1965.
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TOPIC TAGS: thermoelectric power, semiconductor, aluminum oxide , impurity conductivity

ABSTRACT: The thermoelectric power (thermo-emf per degree) of alundum (Al_2O_3) containing Sr, Mg, or Ba impurity was studied in order to determine the type of conductance of this material at 1000–1500K. A maximum thermoelectric power observed at 1250–1400K was: for Mg impurity, 200 $\mu\text{v}/1\text{K}$; for Ba impurity, 400; for Sr impurity, 800; for pure alundum, 200. It is found that: (1) Pure annealed alundum has an n-type conductance while alundum with an impurity, a p-type conductance which reverses into the n-type after annealing; (2) The thermo-emf of

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alundum with impurities has a hole-type conductance; (3) The hole-type conductance remains unchanged after any heat treatment which, apparently, is due to an incorporation of impurity atoms into the alundum lattice; (4) The above results explain heavy leakage currents in electron-tube heaters made from alundum containing alkali-earth-metal impurities. Orig. art. has: 5 figures and 1 table.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 002

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